S/M No.: R63XQ0S001

Service Manual

Microwave Oven

Model : KOR-63XQ0S

✔ Caution

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information,please refer to PPL(Parts Price List) in Service Information Center (http://svc.dwe.co.kr).

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PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(a) Do not operate or allow the oven to be operated with the door open.

(b) Make the following safety checks on all ovens to be serviced before activating the magentron or other microwave source, and make repairs as necessary: (1) Interlock operation, (2) proper door closing, (3) Seal and sealing surfaces (arcing, wear, and other damage), (4) Damage to or loosening of hinges and latches, (5) Evidence of dropping or abuse.

(c) Before turning on power to the microwave oven for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.

(d) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.

(e) A microwave leakage check to verify compliance with the Federal performance standard should be performed on each oven prior to release to the owner.

TABLE OF CONTENTS

SAFETY AND PRECAUTIONS 2
1. FOR SAFE OPERATION 2
2. FOR SAFE SERVICE PROCEDURES 2
SPECIFICATIONS 3
EXTERNAL VIEW 4
1. OUTER DIMENSION 4
2. FEATURE DIAGRAM 5
3. CONTROL PANEL 6
INSTALLATION 8
OPERATIONS AND FUNCTIONS 9
DISASSEMBLY AND ASSEMBLY 10
INTERLOCK MECHANISM AND ADJUSTMENT 17
TROUBLE SHOOTING GUIDE 18
MEASUREMENT AND TEST 22
1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT 22
2. MICROWAVE RADIATION TEST 23
3. COMPONENT TEST PROCEDURE 24
WIRING DIAGRAM 25
PRINTED CIRCUIT BOARD 26
1. CIRUCIT CHECK PROCECDURE 26
2. PCB CIRCUIT DIAGRAM 29
3. P.C.B. LOCATION NO 30
EXPLODED VIEW AND PARTS LIST 32
1. DOOR ASSEMBLY 32
2. CONTROL PANEL ASSEMBLY 32
3. TOTAL ASSEMBLY 32

SAFETY AND PRECAUTIONS

1. FOR SAFE OPERATION

Damage that allows the microwave energy (that cooks or heats the food) to escape will result in poor cooking and may cause serious bodily injury to the operator.

IF ANY OF THE FOLLOWING CONDITIONS EXIST, OPERATOR MUST NOT USE THE APPLIANCE.

(only a trained service personnel should make repairs.)

(1) A broken door hinge.
(2) A broken door viewing screen.
(3) A broken front panel, oven cavity.
(4) A loosened door lock.
(5) A broken door lock.

The door gasket plate and oven cavity surface should be kept clean.

No grease, soil or spatter should be allowed to build up on these surfaces or inside the oven.

DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN.

The microwave oven has concealed switches to make sure the power is turned off when the door is opened.

Do not attempt to defeat them.

DO NOT ATTEMPT TO SERVICE THIS APPLIANCE UNTIL YOU HAVE READ THIS SERVICE MANUAL.

2. FOR SAFE SERVICE PROCEDURES.

1. If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
2. If any certified oven unit is found to servicing, a microwave emission check should be performed prior to servicing the oven.
   (1) inform the manufacturer, importer or assembler,
   (2) repair the unit at no cost to the owner,
   (3) attempt to ascertain the cause of the excessive leakage,
   (4) tell the owner of the unit not to use the unit until the oven has been brought into compliance.
3. If the oven operates with the door open, the service person should tell the user not to operate the oven and contact the manufacturer immediately.

IMPORTANT

The wire in this mains lead coloured in accordance with the following code.

Green-and-yellow	:Earth
Blue	:Neutral
Brown	:Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter 'E', earth symbol or coloured green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red.

NOTE : This oven is designed for counter-top use only.

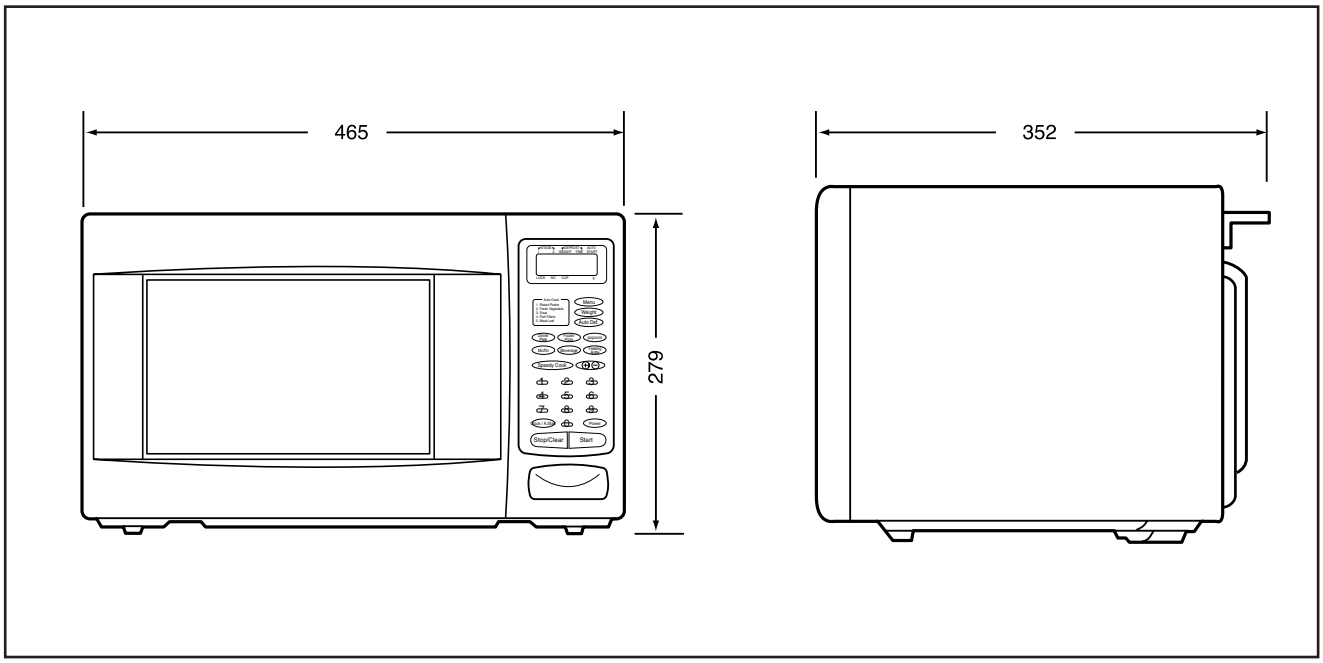
SPECIFICATIONS

MODEL		KOR-63XQ
POWER SUPPLY		230V~50Hz SINGLE PHASE WITH EARTHING
POWER CONSUMPTION	MICROWAVE	1200W
	GRILL	
	COMBINATION	
MICROWAVE ENERGY OUTPUT		800W
MICROWAVE FREQUENCY		2450MHz
OUTSIDE DIMENSIONS (W × H × D)		465 × 279 × 352 mm (18.3 × 11.0 × 13.9 in.)
CAVITY DIMENSIONS (W × H × D)		290 × 220 × 290 mm (11.4 × 8.7 × 11.4 in.)
NET WEIGHT		APPROX. 13Kg(28.7 lbs.)
TIMER		59 min. 99 sec
FUNCTION SELECTIONS		MICROWAVE
POWER SELECTIONS		10 LEVELS
CAVITY VOLUME		0.7 Cu. Ft

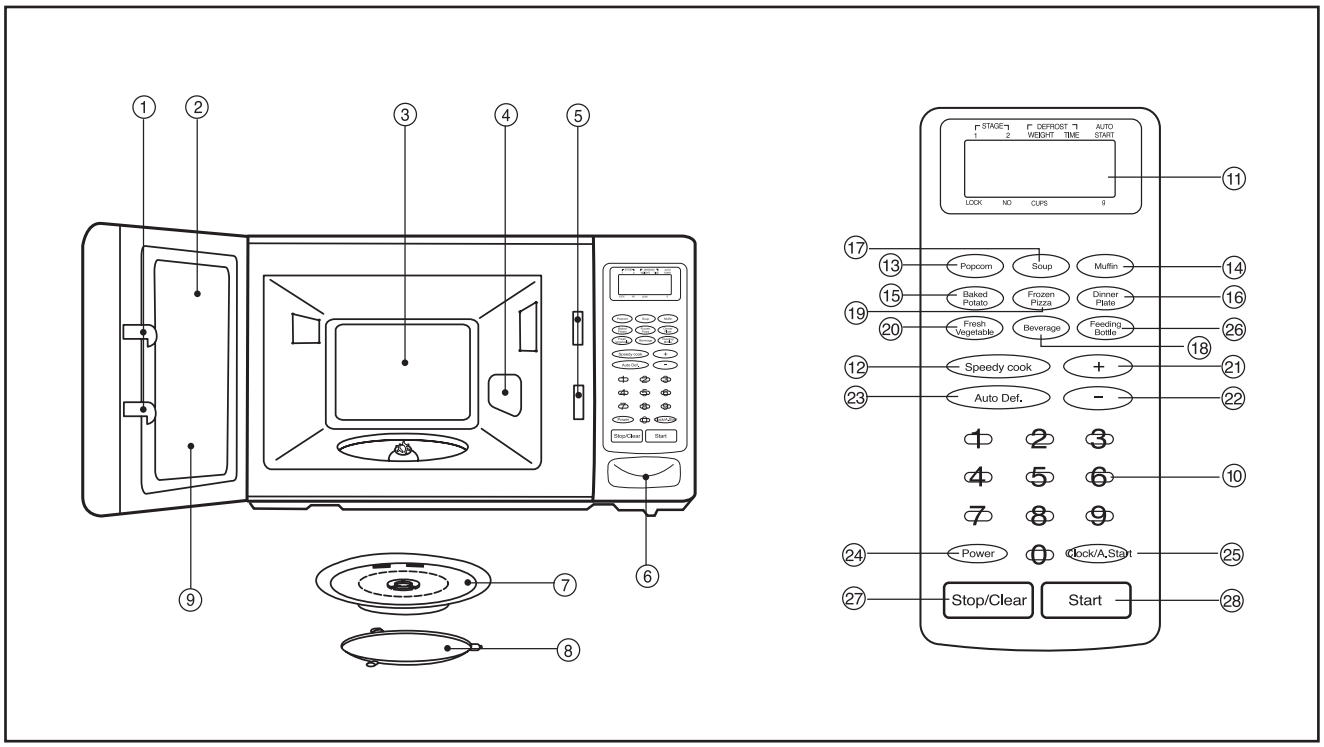
♣ SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

EXTERNAL VIEW

1. OUTER DIMENSION



2. FEATURE DIAGRAM



1. DOOR latch
   When the door is closed it will automatically shut off.
   If the door is opened while the oven is operating. The magnetron will automatically shut off.
2. DOOR seal
   The door seal maintains the microwave within the oven cavity and prevents microwave leakage.
3. Oven cavity.
4. Spatter shield
   Protects the microwave outlet from splashes of cooking foods.
5. Safety interlock system
   Prevents the oven from operating while the door is opened.
6. Door release button
   Pushing this button stops oven operation and opens the door.
7. Glass cooking tray
   Made of special heat resistant glass. The tray must always be in proper position before operating. Do not cook food directly on the tray.
8. Roller guide
   Supports the glass cooking tray.
9. Door screen
   Allows viewing of food. The screen is designed so that light can pass through, but not the microwaves.
10. Time set pad
    Used to set the cooking time and the present time.
11. Display
    Cooking time, power level, present time are displayed.
12. Speedy cook - Touch to set the any desired reheat setting.
13. Popcorn - Used to cook popcorn.
14. Muffin - Used to cook muffin.
15. Baked potato - Used to baked potato.
16. Dinner plate - Used to reheat dinner plate.
17. Soup - Used to reheat soup.
18. Beverage - Used to reheat beverage.
19. Frozen pizza - Used to reheat frozen pizza.
20. Fresh vegetable - Used to blanch fresh vegetable.
21. More - Used to add on one touch cooking
22. Less - Used to remove one touch cooking.
23. Auto defrost - Used to defrost foods.
24. Power - Used to set power level.
25. Clock/A. start - Used to set clock & Used to set auto start.
26. Feeding bottle - Used to sterilize bottle.
27. Stop/Clear- Used to stop the oven operation or to delete the cooking data.
28. Start- Used to start a selected operation.

INSTALLATION

1. Steady, flat location

This microwave oven should be set on a steady, flat surface
This microwave oven is designed for counter top use only.

2. Leave space behind and side

All air vents should be kept a clearance. If all vents are covered during operation, the oven may overheat and, eventually, cause failure.

3. Away from Radio and TV sets

Poor television reception and radio interference may result if the oven is located close to a TV, Radio, antenna or feeder and so on. Position the oven as far from them as possible.

4. Away from heating appliances and water taps

Keep the oven away from hot air, steam or splash when choosing a place to position it, or the insulation might be adversely affected and breakdowns occur.

5. Power supply

- Check your local power source. This microwave oven requires a current of approximately 6 amperes, 230V, 50Hz
- Power supply cord is about 0.8 meters long.
- The voltage used must be the same as specified on this oven. Using a higher voltage may result in a fire or other accident causing oven damage. Using low voltage will cause slow cooking. We are not responsible for damage resulting from use of this oven with a voltage of ampere fuse other than those specified.
- This appliance is supplied with cable of special type, which, if damaged, must be repaired with cable of same type.
- Such a cable can be purchased from DAEWOO and must be installed by a Qualified Person.

6. Examine the oven after unpacking for any damage such as:

A misaligned door, broken door or a dent in cavity.
If any of the above are visible, DO NOT INSTALL, and notify dealer immediately.

7. Do not operate the oven if it is colder than room temperature.

(This may occur during delivery in cold weather.) Allow the oven to become room temperature before operating.

EARTHING INSTRUCTIONS

This appliance must be earthed. In the event of an electrical short circuit, earthing reduces the risk of the electric shock by providing an escape wire for the electric current. This appliance is equipped with a cord having a earthing wire with a earthing plug. The plug must be plugged into an outlet that is propely installed and earthed.

WARNING

Improper use of the earthing plug can result in a risk of electric shock.
Consult a qualified electrician or serviceman if the earthing instructions are not completely understood, or if doubt exists as to whether the appliance is properly earthed, and either.
If it is necessary to use an extension cord, use only a 3-wire extension cord that has a 3-blade earthing plug, and a 3-slot receptacle that will accept the plug on the appliance.
The marked rating of the extension cord should be equal to or greater than the electrical rating of the appliance, or Do not use an extension cord.

OPERATIONS AND FUNCTIONS

1. Connect the main lead to an electrical outlet.
2. After placing the food in a suitable container, open the oven door and put it on the glass tray. The glass tray must always be in place during cooking.
3. Close the door securely.
4. When the oven door is opened, the light turns off.
5. The oven door can be opened at any time during operation by touching the door release button on the control panel. The oven will automatically shut off. To restart the oven, close the door and then touch START.
6. Each time a pad is touched, a BEEP will sound to acknowledge the touch.
7. The oven automatically cook on full power unless set to a lower power level.
8. The display will show : 0 when the oven is plugged in.
9. Time clock returns to the present time when the cooking time ends.
10. When the STOP/CLEAR pad is touched during the oven operation, the oven stops cooking and all information retained. To erase all information(except the present time), touch the STOP/CLEAR pad once more. If the oven door is opened during the oven operation, all informaiton is retained.
11. If the START pad is touched and the oven does not operate, check the area between the door and door is closed securely. The oven will not start cooking under the door is completely closed or the program has been reset.

Make sure the oven is properly installed and plugged into the electrical outlet.

Wattage output chart

The power level is set by pressing the Power pad. The chart shows the display, the power level and the percentage of power.

Touch Power pad, Once the touch	Power Level (Display)	Approximate Percentage of Power
POWER	P-HI	100%
9	P-90	90%
8	P-80	80%
7	P-70	70%
6	P-60	60%
5	P-50	50%
4	P-40	40%
3	P-30	30%
2	P-20	20%
1	P-10	10%
0	P-00	0%

DISASSEMBLY AND ASSEMBLY

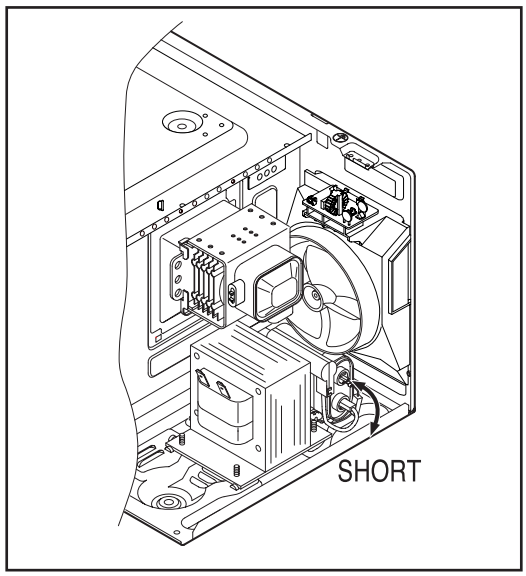
Cautions to be observed when trouble shooting.

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment. It is completely safety during normal operation. However, carelessness in servicing the oven can result in an electric shock or possible danger from a short circuit. You are asked to observe the following precautions carefully.

1. Always remove the power plug from the outlet before servicing.
2. Use an insulated screwdriver and ware rubber gloves when servicing the high voltage side.
3. Discharge the high voltage capacitor before touching any oven components or wiring.

(1) Check the earthed.
Do not operate on a two-wire extension cord.
The microwave oven is designed to be used with earthed.
It is imperative, therefore, to make sure it is earthed properly before beginning repair work.

(2) Warning about the electric charge in the high voltage capacitor.
For about 30 seconds after the operation has stopped and electric charge remains in the high voltage capacitor. When replacing or checking parts, short between oven chassis and the negative high terminal of the high voltage capacitor, by using a properly insulated screwdriver to discharge.



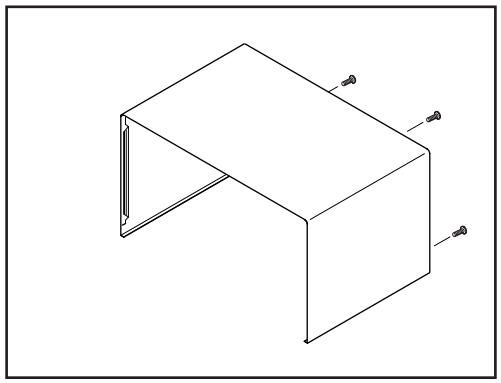
4. When the 12A fuse is blown out due to the operation of the monitor switch, replace primary interlock switch, secondary interlock switch and interlock monitor switch.
5. After repair or replacement of parts, make sure that the screws are properly tightened, and all electrical connections are tightened.
6. Do not operate without cabinet.

CAUTION : Service personnel should remove their watches whenever working close to or replacing the magnetron.

WARNING : When servicing the appliance, need a care of touching or replacing high potential parts because of electrical shock or exposing microwave. These parts are as follows - HV Transformer, Magnetron, HV Capacitor, HV Diode. HV Fuse.

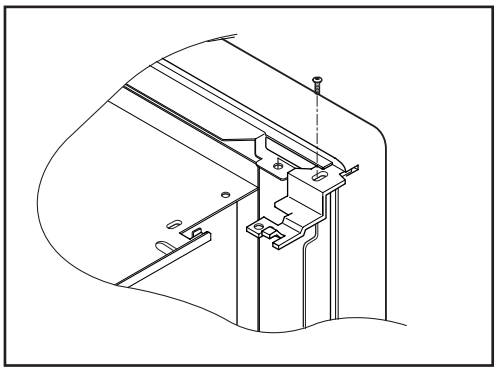
1. To remove cabinet

1) Remove three screws on cabinet back.
2) Push the cabinet backward.



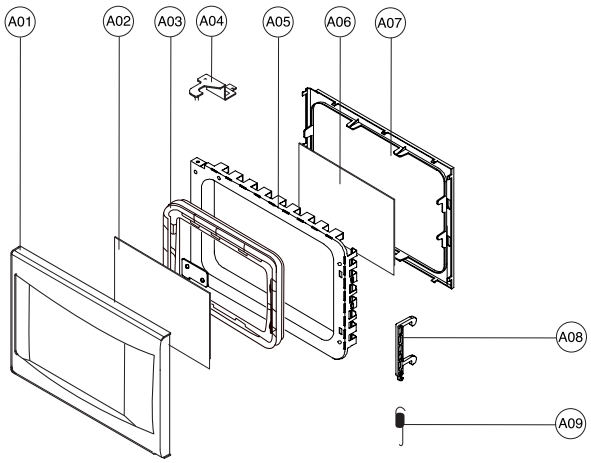
2. To remove door assembly

1) Remove a screws which secure the stopper hinge top.
2) Remove the door assembly from top plate of cavity.
3) Reverse the above for reassembly.



NOTE : After replacing the door assembly, perform a check of correct alignment with the hinge and cavity front plate.

3. To remove door parts.



(1) KOR-63XQ0S

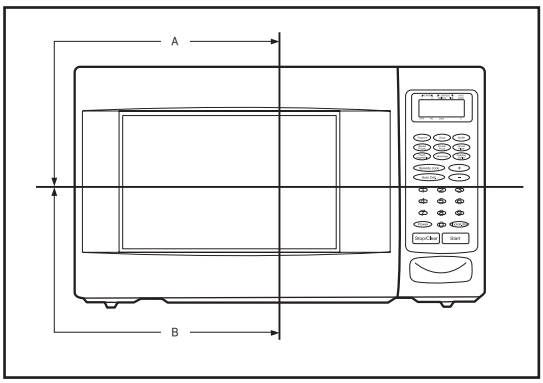
REF.NO	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A01	3512202030	FRAME DOOR	ABS SG-175, SG-0760D	1	
A02	3517006180	BARRIER-SCREEN * O	SAN	1	
A03	3515304610	SUPPORTER BARR-S * O	PP	1	
A04	3515204100	STOPPER HINGE * T AS	KOR-63150S	1	
A05	3511705500	DOOR WELD AS	KOR-61150S	1	
A06	3517002800	BARRIER-SCREEN * I	POLYESTER TO. 1	1	
A07	3512300210	GASKET DOOR	PP	1	
A08	3513100700	HOOK	POM	1	
A09	3515101300	SPRING HOOK	PW1	1	

(1) Remove the gasket door from door plate.
(2) Remove the barrier screen inner from door plate.
(3) Remove the door frame from door plate.
(4) Remove the stopper hinge top from door plate.
(5) Remove the spring and the hook.
(6) Remove the supporter barrier screen outer from door frame.
(7) Remove the barrier screen outer from door frame.
(8) Reverse the above steps for reassembly.

4. Method to reduce the gap between the door seal and the oven front surface.

(1) To reduce gap located on part 'A'.
- Loosen a screw on stopper hinge top, and then push the door to contact the door seal to oven front surface.
- Tighten a screw.

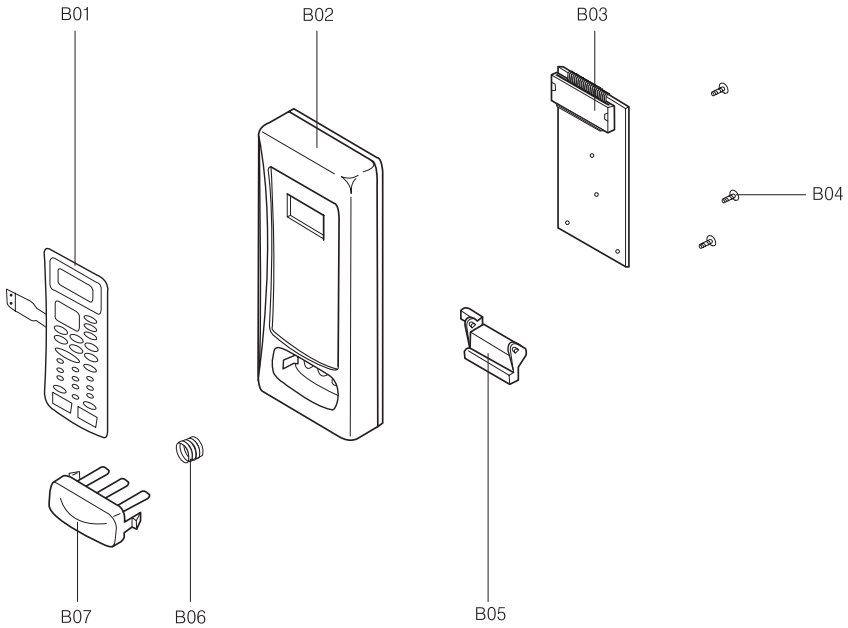
(1) To reduce gap located on part 'B'.
- Loosen two screws on stopper hinge under, and then push the door to contact the door seal to oven front surface.
- Tighten two screws.



NOTE : A small gap may be acceptable if the microwave leakage does not exceed 4mW/cm^2.

✔ **Caution**: In this Service Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service information Center(http://svc.dwe.co.kr)

5. To remove control panel parts.



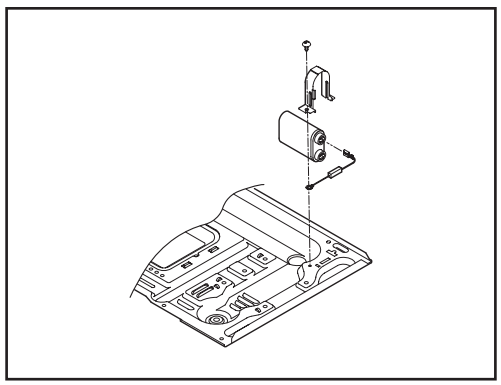
(1) KOR-63XQ0S

REF.NO	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B01	3518519700	SWITCH MEMBRANE	KOR-618Q0S	1	
B02	3516710740	CONTROL PANEL	ABS SG-175, SG-0760D	1	
B03	PKMPMSCY00	PCB MAIN AS	KOR-63XQ0S	1	
B04	7122401211	SCREW TAPPING	T2S TRS 4 * 12 MFZN	3	
B05	3513701420	LEVER DOOR OPEN	PP	1	
B06	441G430171	SPRING BUTTON	SWP	1	
B07	3516904430	BUTTON DOOR OPEN	ABS SG-175, SG-0760D	1	

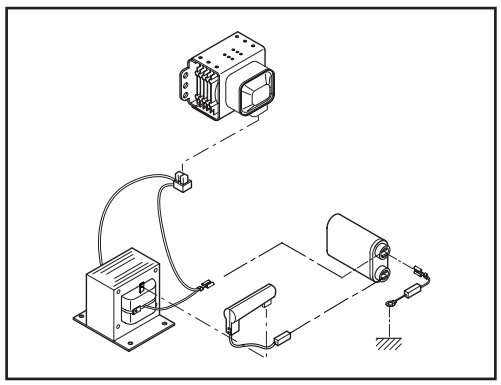
(1) Remove the screw which secure the control panel, push up two snap fits and draw forward the control panel assembly.
(2) Remove the door open lever from the control panel.
(3) Remove four screws which secure the PCB assembly to control panel.
(4) Disconnect membrane tail from the connector of the PCB assembly.
(5) Detach membrane from the control panel.
(6) Remove door open button and button spring from the control panel.
(7) Reverse the above steps for reassembly.

6. To remove high voltage capacitor.

1) Remove a screw which secure the grounding ring terminal of the H.V. diode and the capacitor holder.
2) Remove the H.V. diode from the capacitor holder.
3) Reverse the above steps for reassembly.

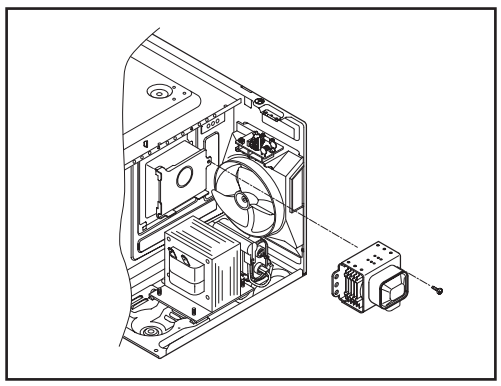


◆ High voltage circuit wiring

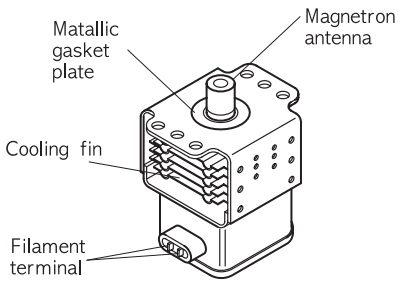


7. To remove magnetron.

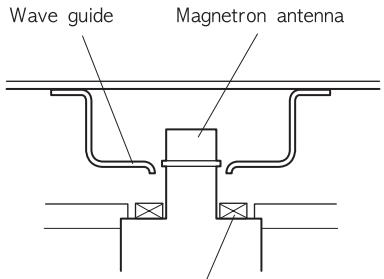
1) Remove a screw which secure the magnetron.
2) Remove the magnetron.
3) Reverse the above steps for reassembly.

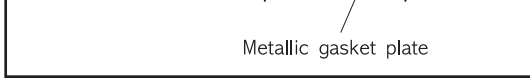


NOTE : Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed 4mW/cm^2 for a fully assembled oven with door normally closed.



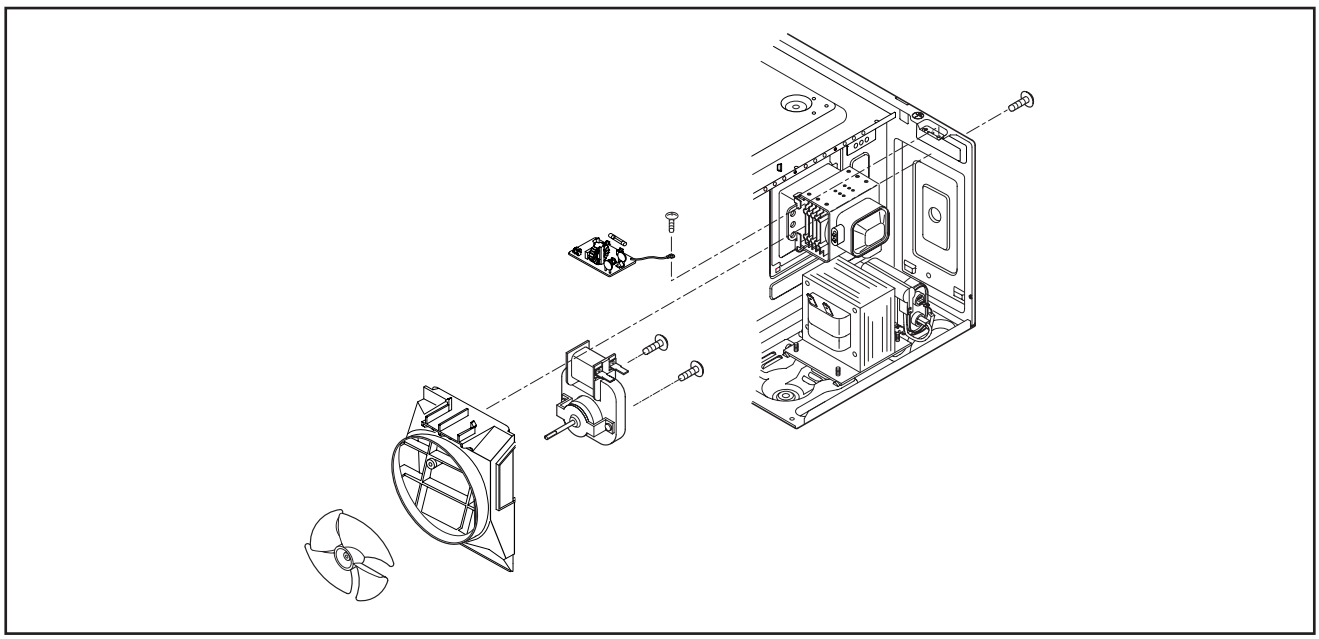
< MATNETRON >





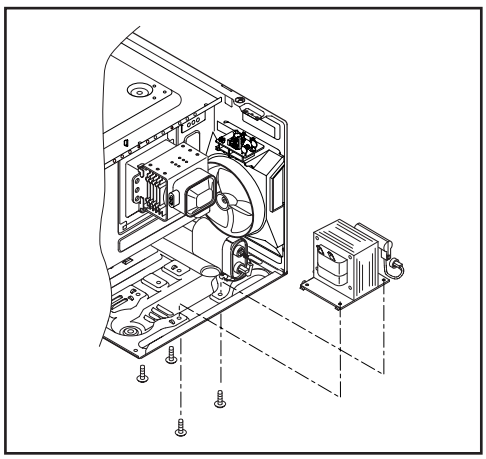
8. To remove wind guide assembly.

1) Remove a screw for earthing.
2) Remove the noise filter from the wind guide.
3) Remove a screw which secure the wind guide assembly.
4) Draw forward the wind guide assembly.
5) Pull the fan from the motor shaft.
6) Remove two screws which secure the motor shaded pole.
7) Remove the motor shaded pole.
8) Reverse the above steps for reassembly.



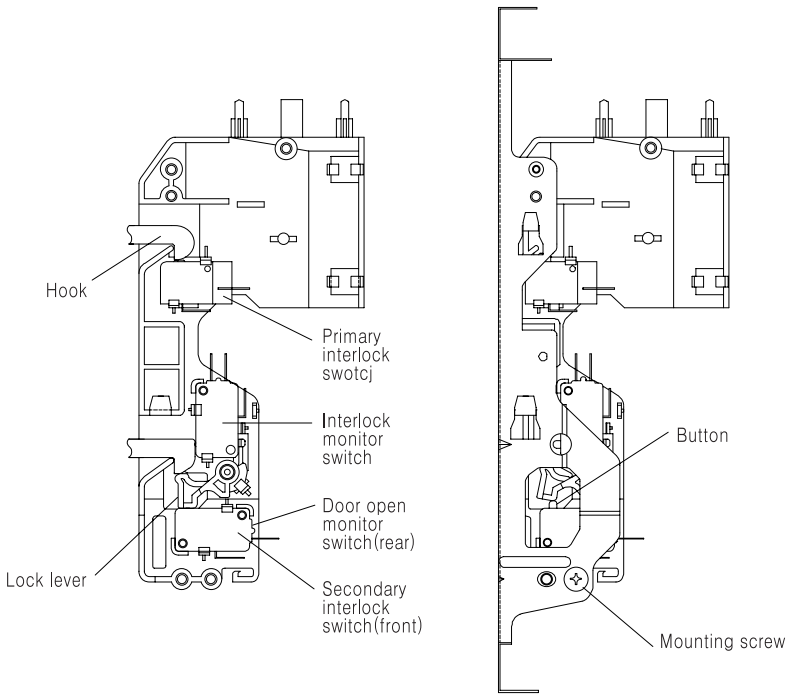
9. To remove H.V.transformer.

1) Remove four screws holding the H.V.transformer.
2) Remove the H.V.transformer.
3) Reverse the above steps for reassembly.



INTERLOCK MECHANISM AND ADJUSTMENT

The door lock mechanism is a device which has been specially designed to completely eliminate microwave radiation when the door is opened during operation, and thus to perfectly prevent the danger resulting from the leakage of microwave.



(1) Primary interlock switch

When the door is closed, the hook locks the oven door. If the door is not closed properly. the oven will not operate.
When the door is closed, the hook pushes the button of the microswitch. Then the button of the primary interlock switch bring it under ON condition.

(2) Secondary interlock switch and interlock monitor switch

When the door is closed, the hook pushes the lock lever downward. The lock lever presses the button of the interlock monitor switch to bring it under NO condition and presses the button of the secondary interlock switch to bring it under ON condition.

ADJUSTMENT
Interlock monitor switch
When the door is closed, the interlock monitor switch should be changed(NO condition) before other switches are closed.
When the door is opened, the interlock monitor switch should be chanded(NC condition) after other switches are opened.

(3) Adjustment steps

a) Loosen the one mounting screw.
b) Adjust interlock switch assembly position.
c) Make sure that lock lever moves smoothly after adjustment is completed.
d) Tighten completely one mounting screw.

NOTE : Microwave emission test should be performed after adjusting interlock mechanism. If the microwave emission exceed 4mW/cm^2, readjust interlock mechanism.

TROUBLE SHOOTING GUIDE

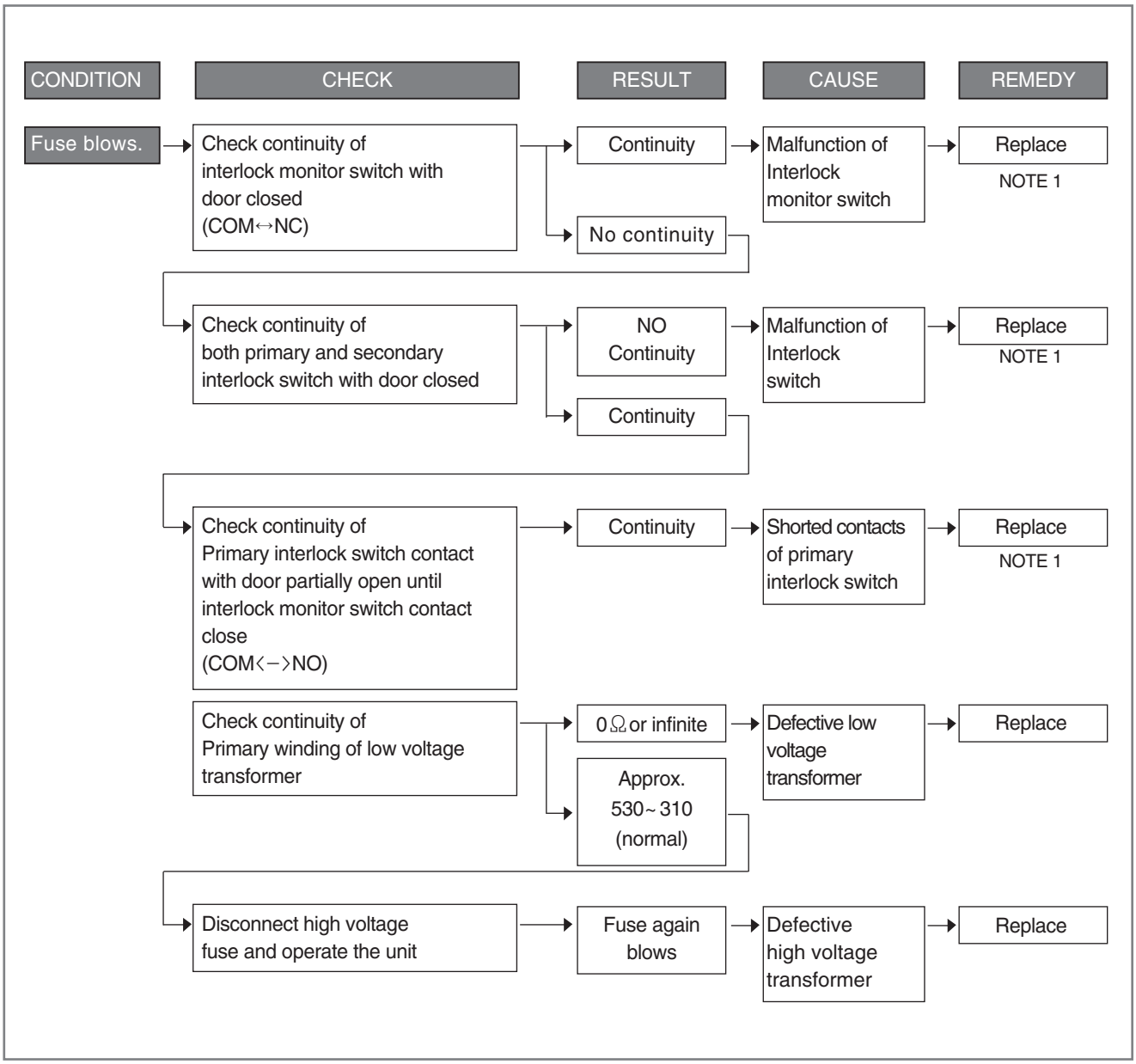
Following the procedure below to check if the oven is defective or not.

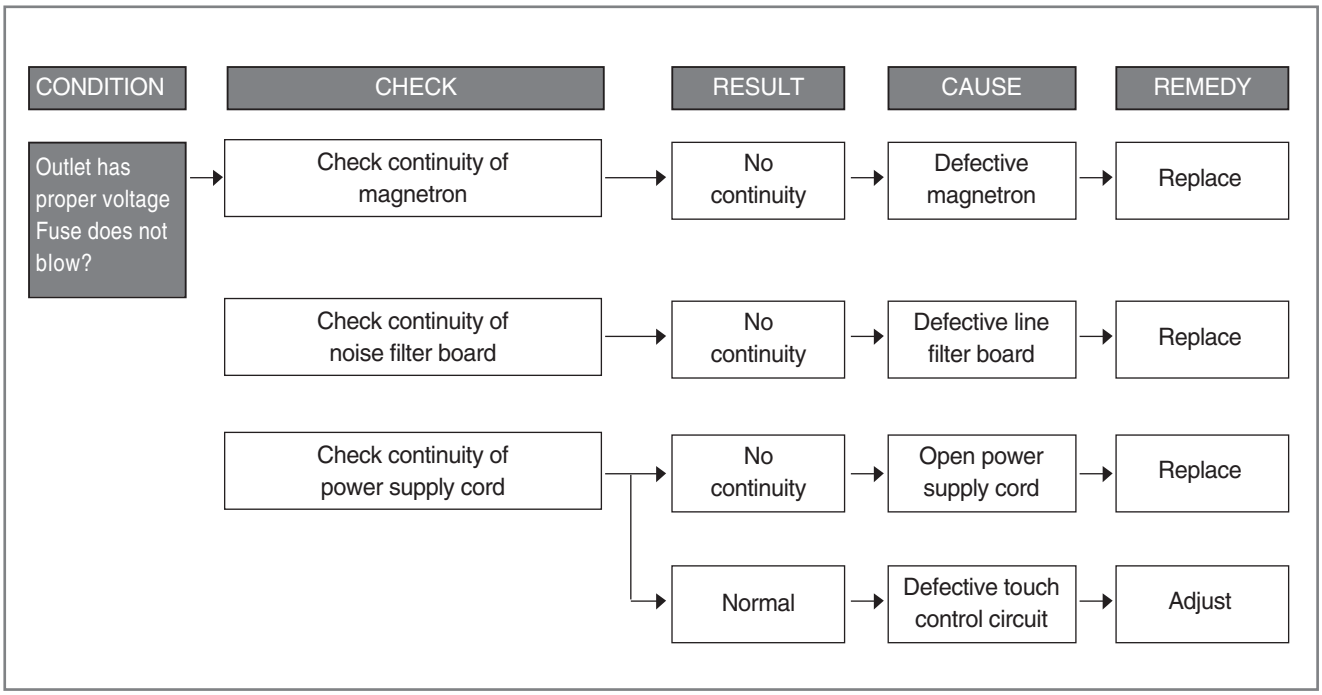
1) Check earthing before trouble checking.
2) Be careful of the high voltage circuit.
3) Discharge the high voltage capacitor.
4) When checking the continuity of the switches, fuse or high voltage transformer, disconnect one load wire from these parts and check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.

NOTE : When electric parts are checked, be sure the power cord is not inserted the wall outlet.
Check wire harness, wiring and connected of the terminals and power cord before check the parts listed below.

(TROUBLE 1)

Oven does not operate at all : any inputs can not be accepted.

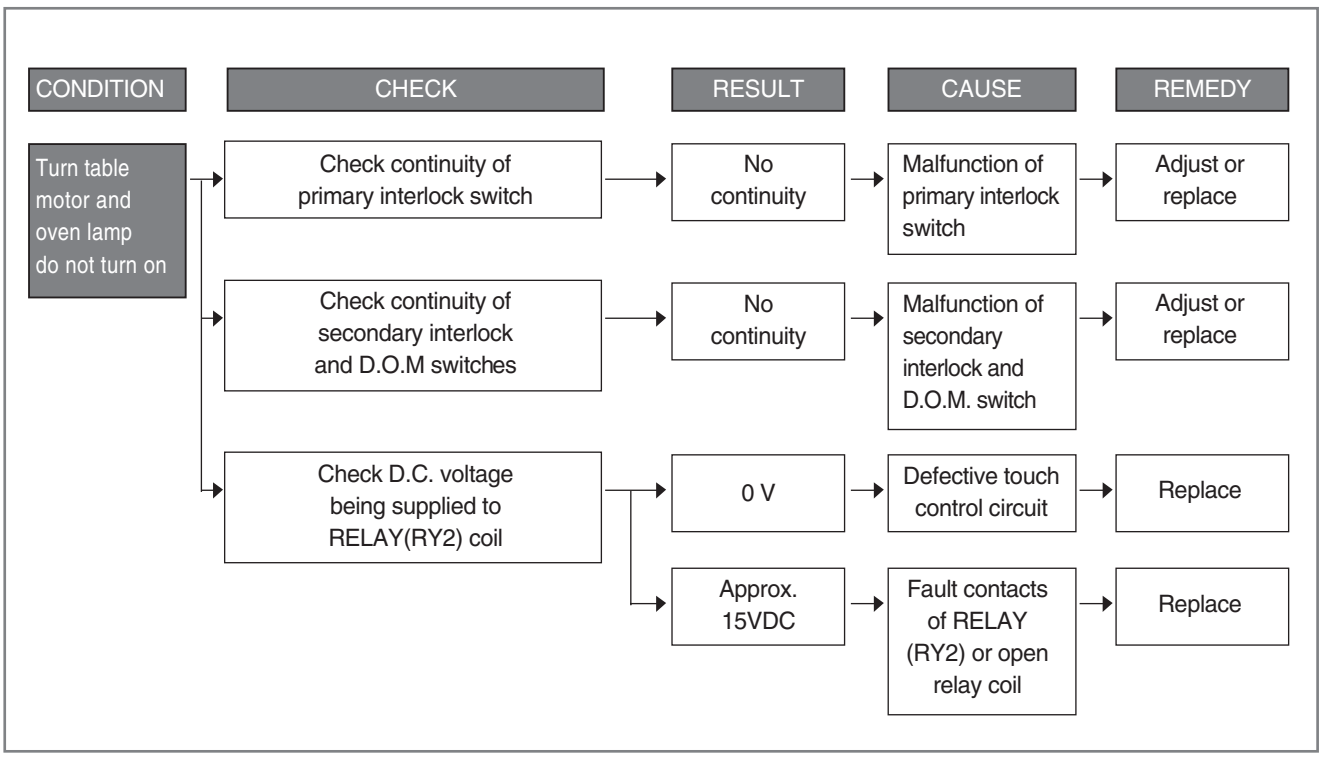




NOTE : All these switches must be replaced at the same time, please refer to “Interlock mechanism And Adjustment.”

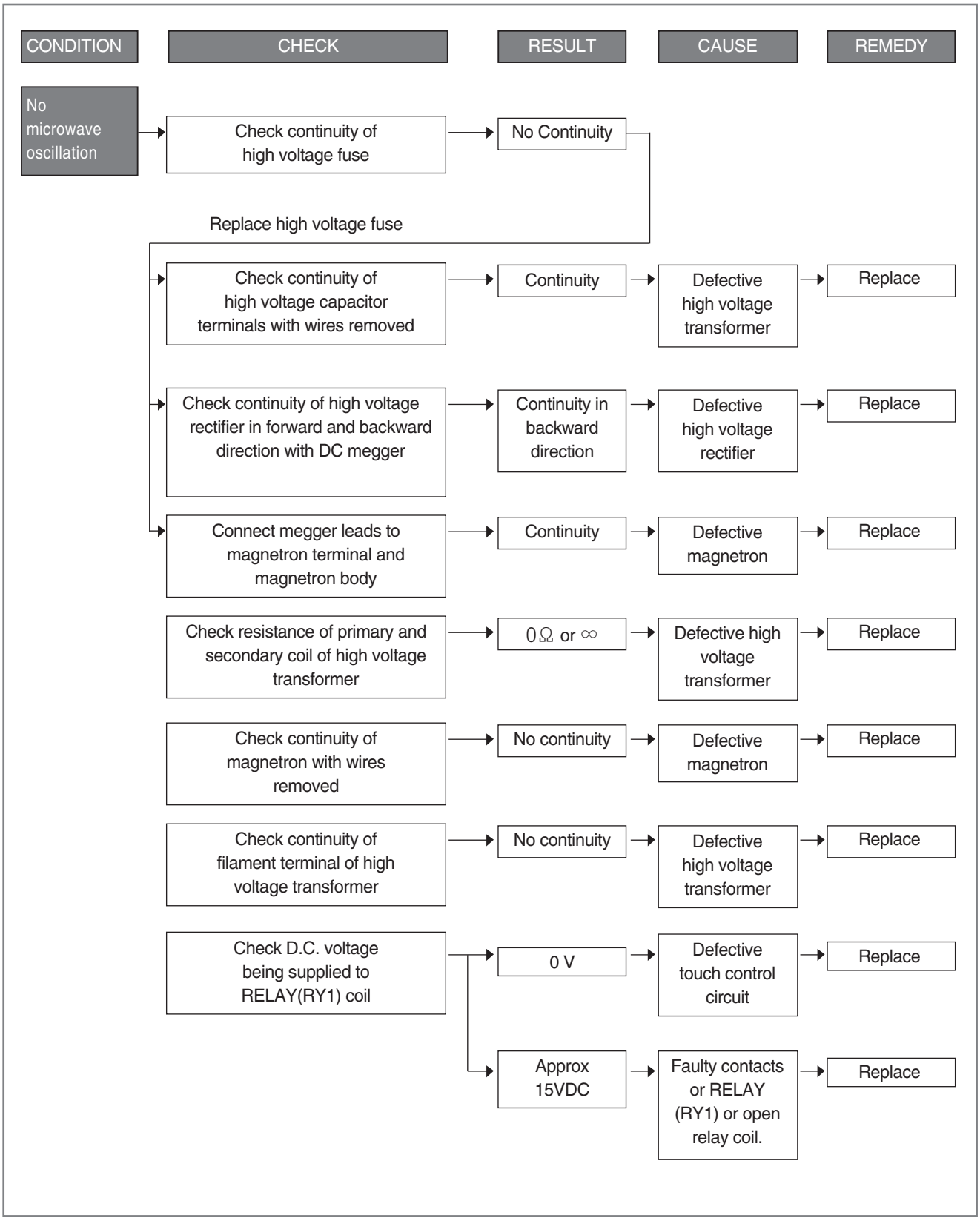
(TROUBLE 2)

Display shows all figures selected, but oven does not start cooking, even though desired program and time are set and start pad is tapped.



(TROUBLE 3)

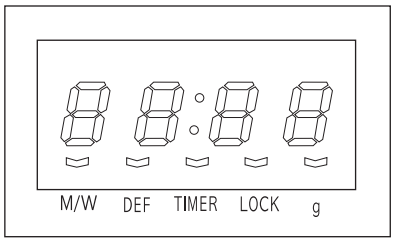
No microwave oscillation even though fan motor rotates.



(TROUBLE 4)

The following visual conditions indicate a probable defective touch control circuit or membrane switch assembly

1. Incomplete segments,
   1) Segment missing.
   2) Partical segments missing.
   3) Digit flickering other than normal display slight flickering.
   4) " : 0" does not display when power is on.



2. A distinct change in the display are not on when they numbers is the display.
3. One or more digits in the display are not on when they should be.
4. Display indicates a number different from one touched.
5. Specific numbers (for example 2 or 3) will not display when the panel is touched.
6. Display does not count down or up with time cooking or clock operation.
7. Oven is programmable and cooks normally but no display shows.
8. Display obviously jumps in time while counting down.
9. Display counts down noticeably too fast while cooking.
10. Display does not show the time of day when clear pad is touched.
11. Oven lamp and turntable motor do not stop although cooking is finished. Check if the RELAY 2 contacts close if they are close, replace touch control circuit.

CONDITION	CHECK	RESULT	CAUSE	REMEDY
Display does not show programming at all, even if keyboard is touched.	Check each pad or continuity of the membrane keyboard for the following keyboard check procedure	Normal	Malfunction of touch control circuit of control box sub-assembly	Replace control box sub-assembly
		Abnormal	Malfunction of the membrane keyboard	Replace the membrane keyboard

NOTE : Before following the particular steps listed above in the trouble shooting guide for the membrane keyborad's, failure, please check for the continuity of each wire-harness between the membrane keyboard and P.C.B. assembly

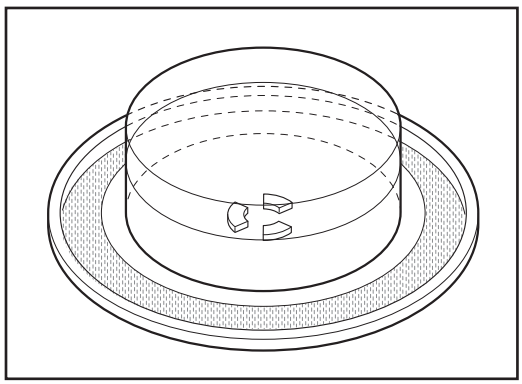
MEASUREMENT AND TEST

1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT

Microwave output power can be checked by indirectly measuring the temperature rise of a certain amount of water exposed to the microwave as directed below.

PROCEDURE

1. Microwave power output measurement is made with microwave oven supplied at rated voltage and operated at it is maximum microwave power setting with a load of 1000±5cc of potable water.
2. The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3 mm and an outside diameter of approximately 190mm.
3. The oven and the empty vessel are at ambient temperature prior to the start of the test. The initial temperature of the water is 10 ± 2℃ (50 ± 3.6˚F). It is measured immediately before the water is added to the vessel. After addition of the water to the vessel, the load is immediately placed on the center of the shelf, which is in the lowest normal position.
4. Microwave power is switched on.
5. Heating time should be exactly A seconds. (Refer to table as following) Heating time is measured while the microwave generator is operating at full power. The filament heat-up time for magnetron is not included.
6. The initial and final temperature of water is selected so that the maximum difference between the ambient and final water temperature is 5K.
7. The microwave power output P in watts is calculated from the following formula:



$$P = 4187 \times \triangle T/t$$

· △ T is difference between initial and ending temperature.
· t is the heating time.
The power measured should be B (Refer to SPECIFICATIONS) W ± 10.0 %.

CAUTION
1. Water load should be measured exactly to 1 liters.
2. Input power voltage should be exactly specified voltage (Refer to SPECIFICATIONS).
3. Ambient temperature should be 20 ± 2℃ (68 ± 3.6˚F)

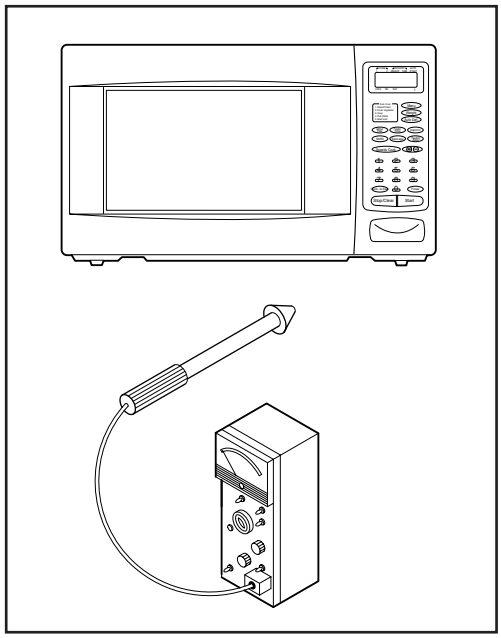
* Heating time for power output:

A (second)	70	64	60	56	52	49	47	44	42	40	38
B (W)	600	650	700	750	800	850	900	950	1000	1050	1100

2. MICROWAVE RADIATION TEST

CAUTION
1. Make sure to check the microwave leakage before and after repair of adjustment.
2. Always start measuring of an unknown field to assure safety for operating personnel from microwave energy.
3. Do not place your hands into any suspected microwave radiation field unless the safe density level is known.
4. Care should be taken not to place the eyes in direct line with the source of microwave energy.
5. Slowly approach the unit under test until the radiometer reads an appreciable microwave leakage from the unit under the test.

PROCEDURE



1. Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100℃ (212°F).
2. Pour 275cc ± 15cc of tap water initially at 20 ± 5℃ (68 ± 9°F) in the 600 cc glass beaker with an inside diameter of approx. 95mm(3.5 in.).
3. Place it at the center of the tray and set it in a cavity.
4. Close the door and operate the oven.
5. Measure the leakage by using Microwave Energy Survey Meter with dual ranges, set to 2450MHz.

1) Measured radiation leakage must not exceed the value prescribed below. Leakage for a fully assembled oven with door normally closed must be less than 4mW/㎠.
2) When measuring the leakage, always use the 5㎝ (2 in.) space cone with probe. Hold the probe perpendicular to the cabinet and door. Place the space cone of the probe on the door, cabinet, door seem, door viewing screen, the exhaust air vents and the suction air vents.
3) Measuring should be in a counter-clockwise direction at a rate of 1 in/sec. If the leakage of the cabinet door seem is unknown, move the probe more slowly.
4) When measuring near a corner of the door, keep the probe perpendicular to the areas making sure the probe end at the base of the cone does not get closer than 2 in. from any metal. If it does not , erroneous reading may result.

3. COMPONENT TEST PROCEDURE

- · High voltage is present at the high voltage terminal of the high voltage transformer during any cooking cycle.
- · It is neither necessary nor advisable to attempt measurement of the high voltage.
- · Before touching any oven components or wiring, always unplug the oven from its power source and discharge the capacitor.

1. High voltage transformer
   1) Remove connections from the transformer terminals and check continuity.
   2) Normal readings should be as follows:
      Secondary winding ... Approx. 110 Ω ±10%
      Filament winding ... Approx. 0 Ω
      Primary winding ... Approx. 1.0 Ω

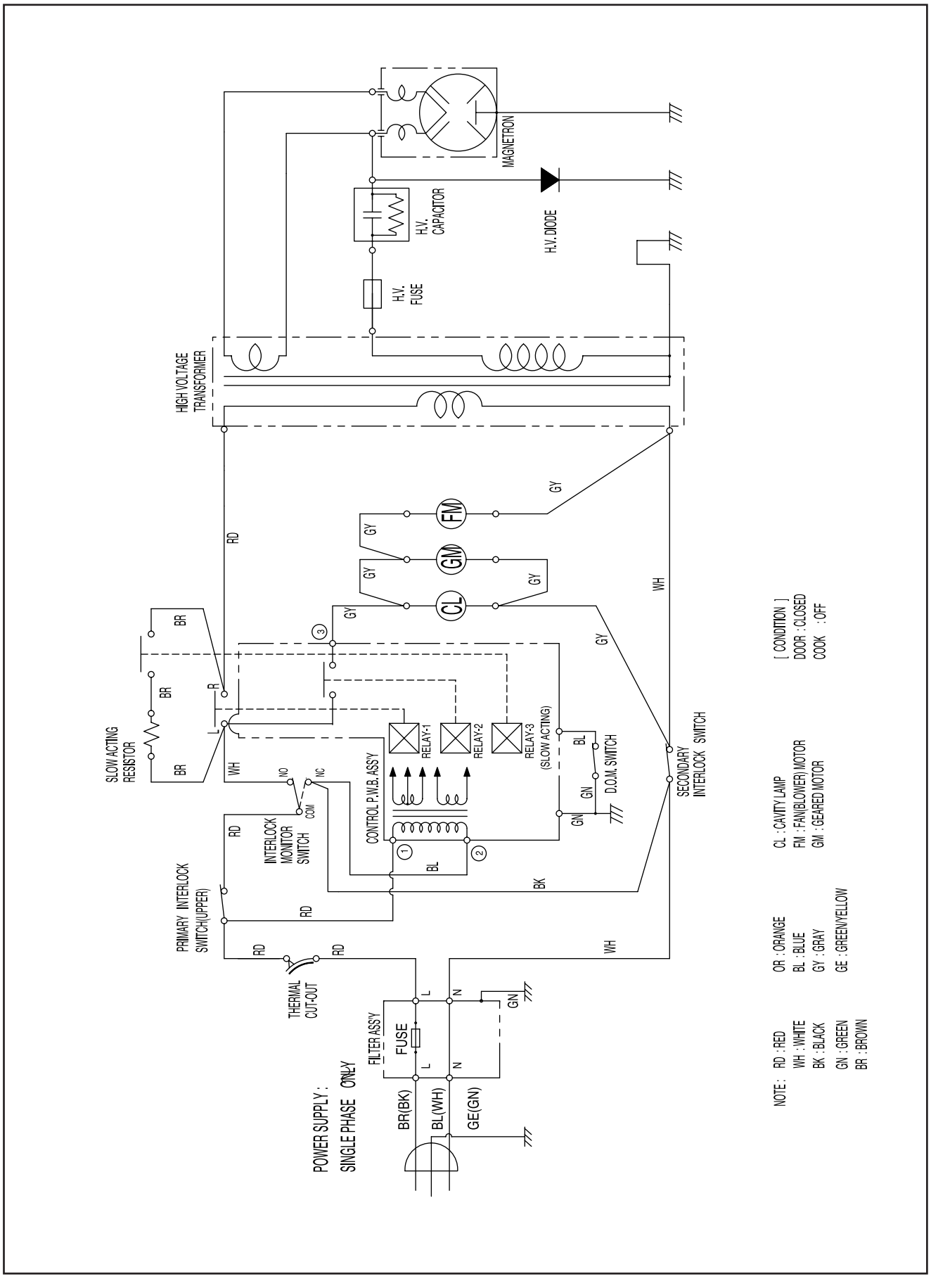
2. High voltage capacitor
   1) Check continuity of capacitor with meter on the highest OHM scale.
   2) A normal capacitor will show continuity for a short time, and then indicate 10MΩ once the capacitor charged.
   3) A shorted capacitor will show continuous continuity.
   4) An open capacitor will show constant 10MΩ.
   5) Resistance between each terminal and chassis should be infinite.

3. High voltage diode
   1) Isolate the diode from the circuit by disconnecting the leads.
   2) With the ohmmeter set on the highest resistance scale measure the resistance across the diode terminals. Reverse the meter leads and again observe the resistance reading. Meter with 6V, 9V or higher voltage batteries should be used to check the front-back resistance of the diode, otherwise an infinite resistance may be read in both directions. A normal diode's resistance will be infinite in one direction and several hundred k Ω in the other direction.

4. Magnetron
   For complete magnetron diagnosis, refer to "Measurement of the Microwave Power Output." Continuity checks can only indicate and open filament or a shorted magnetron. To diagnose for an open filament or a shorted magnetron,
   1) Isolate magnetron from the circuit by disconnecting the leads.
   2) A continuity check across magnetron filament terminals should indicate 0.1 Ω or less.
   3) A continuity check between each filament terminal and magnetron case should read open.

5. Fuse
   If the fuse in the primary and monitor switch circuit is blown when the door is opened, check the primary and monitor switch before replacing the blown fuse. In case the fuse is blown by an improper switch operation, replace the defective switch and fuse at the same time. Replace just the fuse if the switches operate normally.

WIRING DIAGRAM

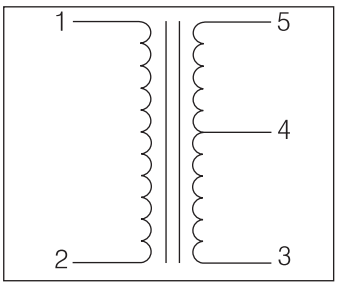


PRINTED CIRCUIT BOARD

CIRCUIT CHECK PROCEDURE

1. Low Voltage Transformer (DMR-602FS) check.

The low voltage transformer is located on the P.C.B.
Measuring condition: Input voltage: 230V / Frequency: 50Hz

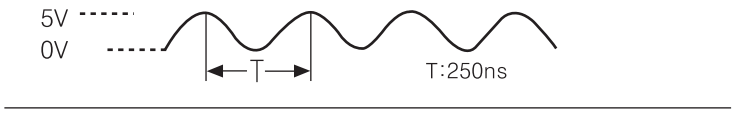


Terminal \ Voltage		LOAD	NO LOAD
3-5	50Hz input	27 VAC	30VAC

NOTE
1. Secondary side voltage of the low voltage transformer changes in proportion to fluctuation of power source voltage.
2. The allowable tolerance of the secondary voltage is within ± 5% of nominal voltage

2. Voltage Check

Key check point

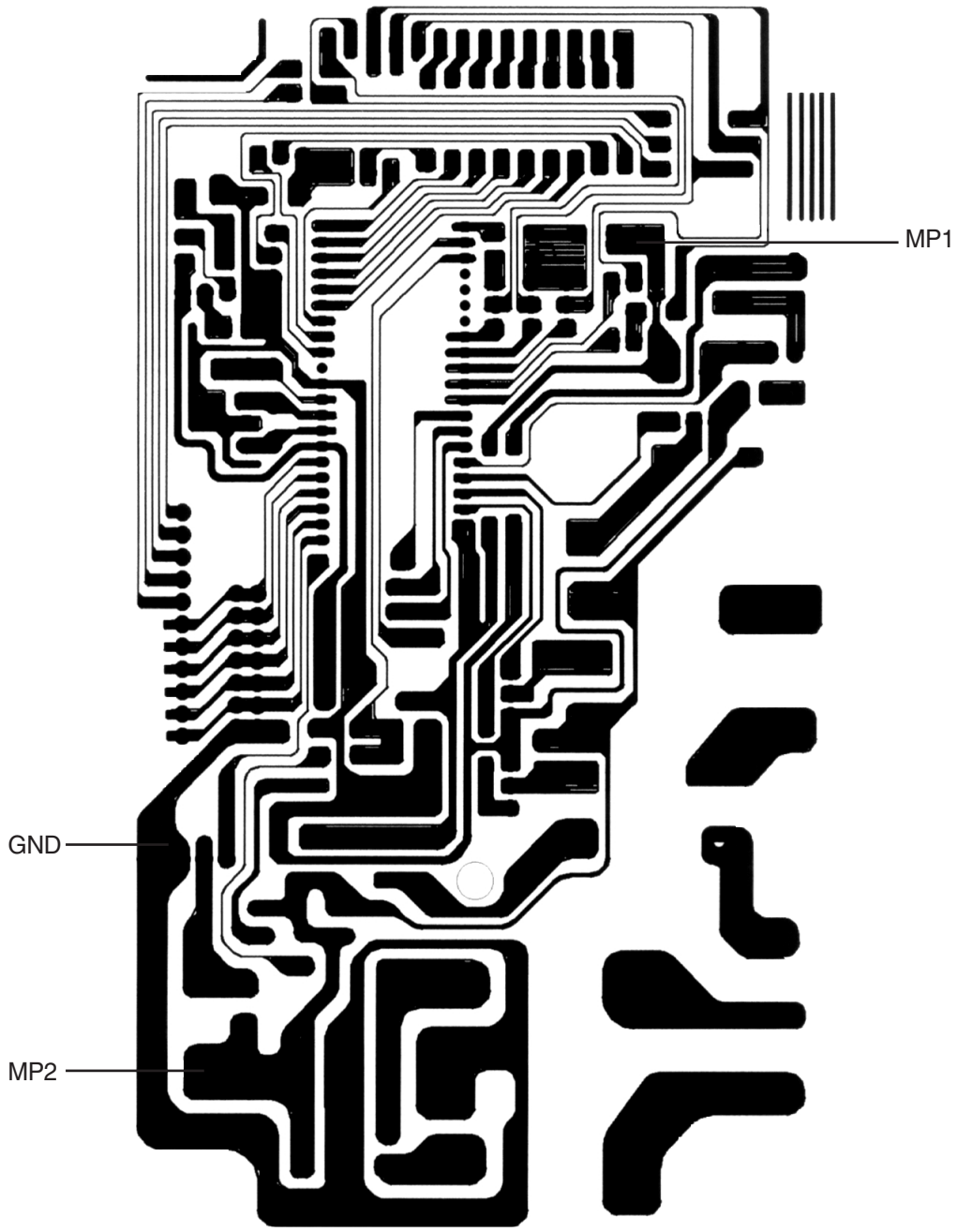
NO	CHECK POINT	REMARK
1	IC1 PIN 7, 41, 42	5VDC
2	IC1 PIN 11	GND
3	IC1 PIN 23	
4	IC1 PIN 8 or 9	

CHECK METHOD

NO	MEASURE POINT	WAVE FORM	REMEDY	REMARK
1	MP1	CD 5V±0.25	Replace VL1, EC1, C4, C6	NO LOAD
2	MP2	DC 14V±1.0	Replace D13, D14, EC2	NO LOAD

NOTE : Each measure point must to measured with GND points.

KOR-63XQ

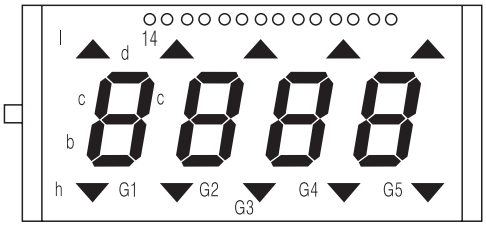


< BOTTOM VIEW >

Fig. 6 Measurement Point

3) Display problems

NO	CAUSE	MEASUREMENT	RESULT	REMEDY
1	Defective Display	Refer to “The display trouble shooting data” below.		Replace P. C. B. assembly.



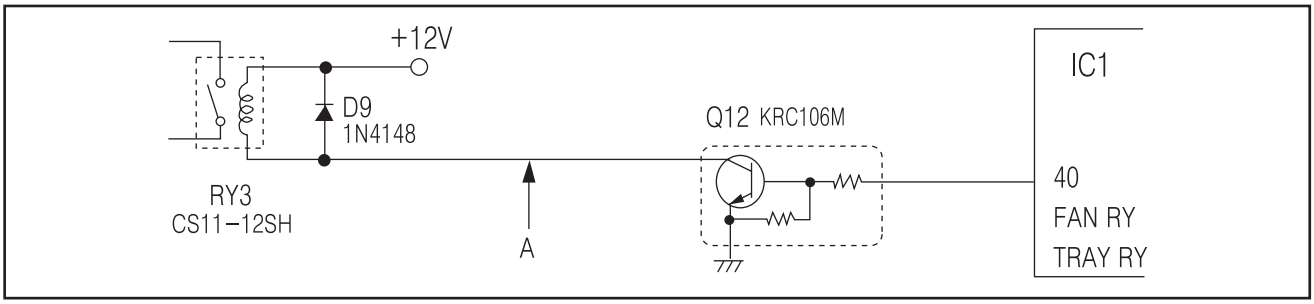
Display layout
(Top View)

The display trouble shooting data

TROUBLE	DISPLAY NAME & PIN NO.	MICOM OUTPUT IN PIN NO.
STAGE 1, LOCK don’t come on.	Digit 1 (G1), 10	31
STAGE 2, NO don’t come on.	Digit 2 (G2), 11	32
WEIGHT DEFROST, CUPS don’t come on.	Digit 3 (G3), 14	30
TIME DEFROST doesn’t come on.	Digit 4 (G4), 12	33
AUTO START,g don’t come on.	Digit 5 (G5), 13	29
SEGMENT “a” doesn’t come on from G1 to G5.	SEGMENT a, 7	20
SEGMENT “b” doesn’t come on from G1 to G5.	SEGMENT b, 6	19
SEGMENT “c” doesn’t come on from G1 to G5.	SEGMENT c, 5	18
SEGMENT “d” doesn’t come on from G1 to G5.	SEGMENT d, 4	17
SEGMENT “e” doesn’t come on from G1 to G5.	SEGMENT e, 3	16
SEGMENT “f” doesn’t come on from G1 to G5.	SEGMENT f, 2	14
SEGMENT “g” doesn’t come on from G1 to G5.	SEGMENT g, 1	13
LOCK, NO, CUPS, g don’t come on.	LOWER BAR h, 9	15
STAGE1, STAGE2, TIME DEFROST, WEIGHT DEFROST, AUTO START don’t come on.	UPPER BAR i, 8	21

4) When there is no microwave oscillation.

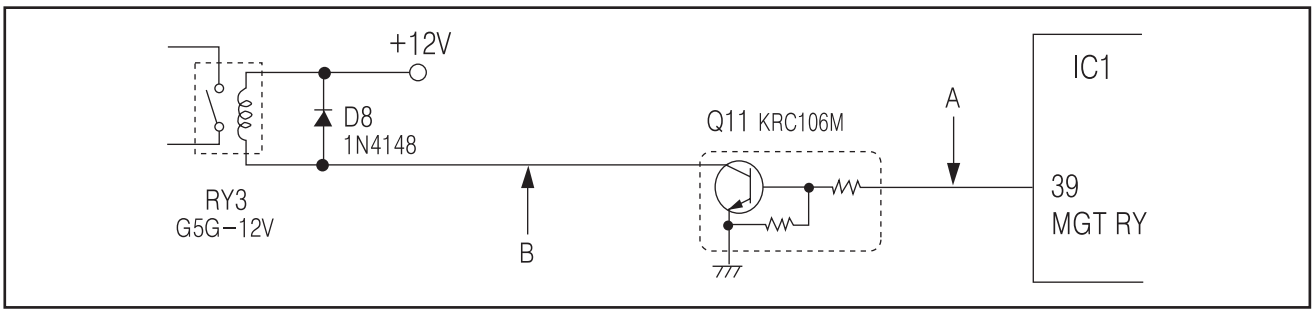
(1) When touching “START” pad, oven lamp does not turn on.
Fan motor and turntable motor do not rotate, but cook indicator in display comes on.
*Cause: RELAY “3” does not operate.



CHECK METHOD

STAGE \ POINT	A
RELAY “3” ON	GND
RELAY “3” OFF	+12V DC

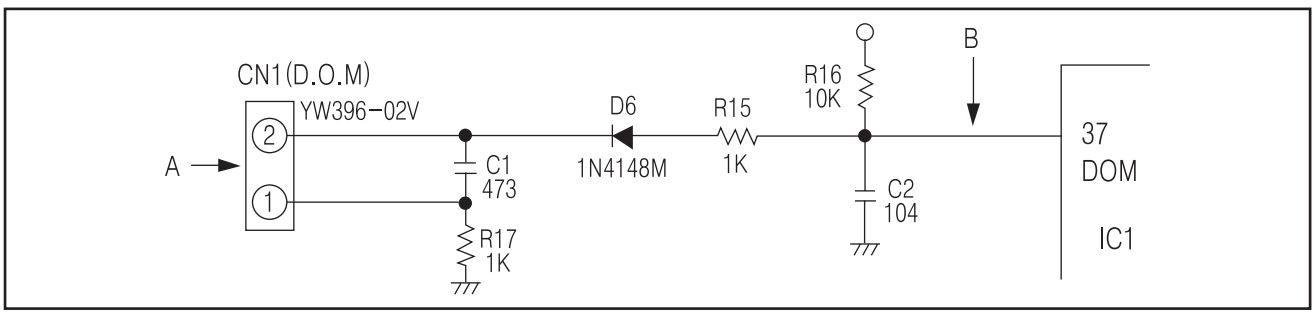
(2) When touching “START” pad, oven lamp turns on.
Fan motor and turntable rotate and cook indicator in display comes on.
*Cause: RELAY “2” does not operate.



CHECK METHOD

STAGE \ POINT	A	B
RELAY “2” ON	+5VDC	GND
RELAY “2” OFF	LN	+12VDC

5) When the door is opened during operation, the count down timer does not stop.

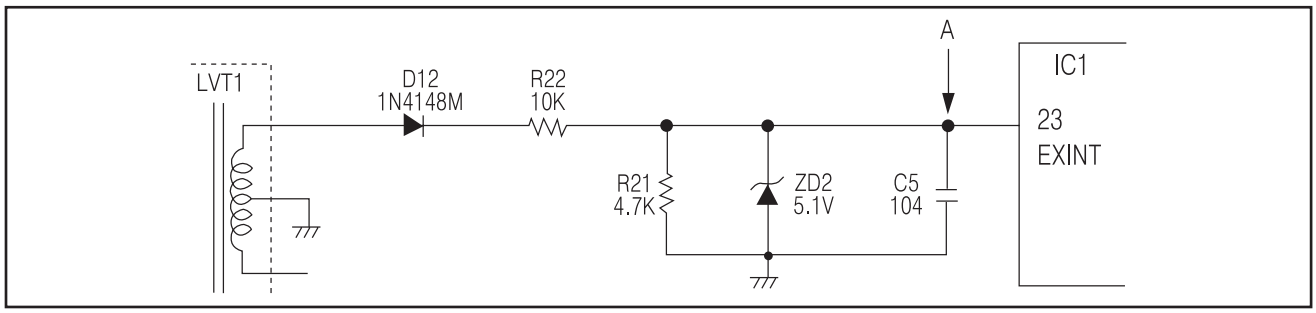


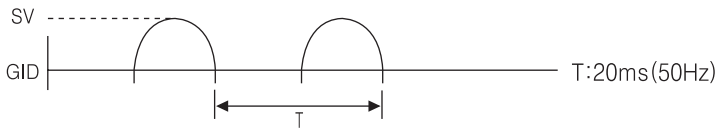
CHECK METHOD

STAGE \ POINT	A	B
1) DOOR OPENED	OPEN	5VDC
2) DOOR CLOSED	CLOSE	GND

CHECK NO.	METHOD	REMEDY
1	Check the stage (ON, OFF) of the secondary Interlock switch by resistance measurement.	Replace secondary interlock switch

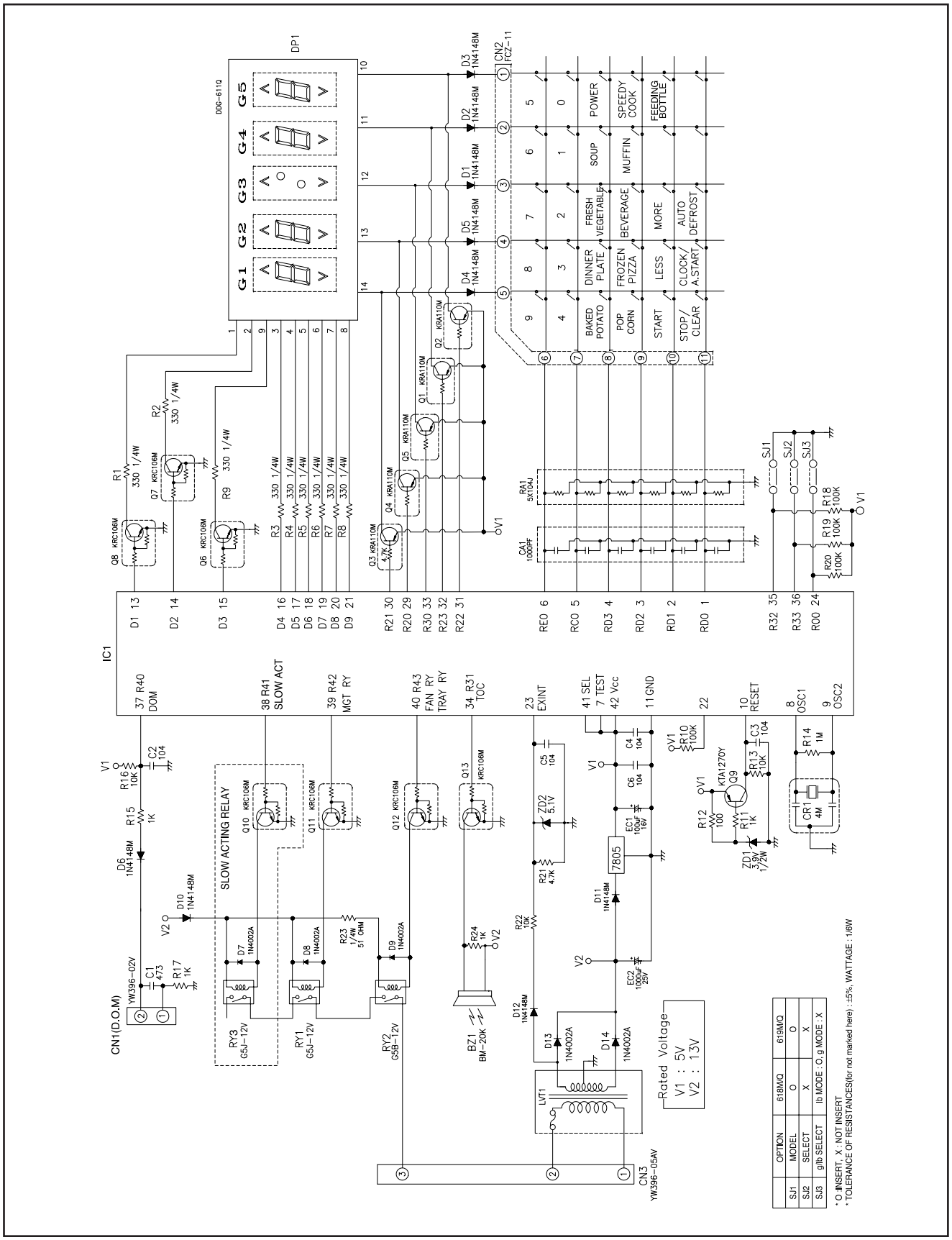
6) When the digital clock does not operate properly



POINT	WAVEFORM
A	

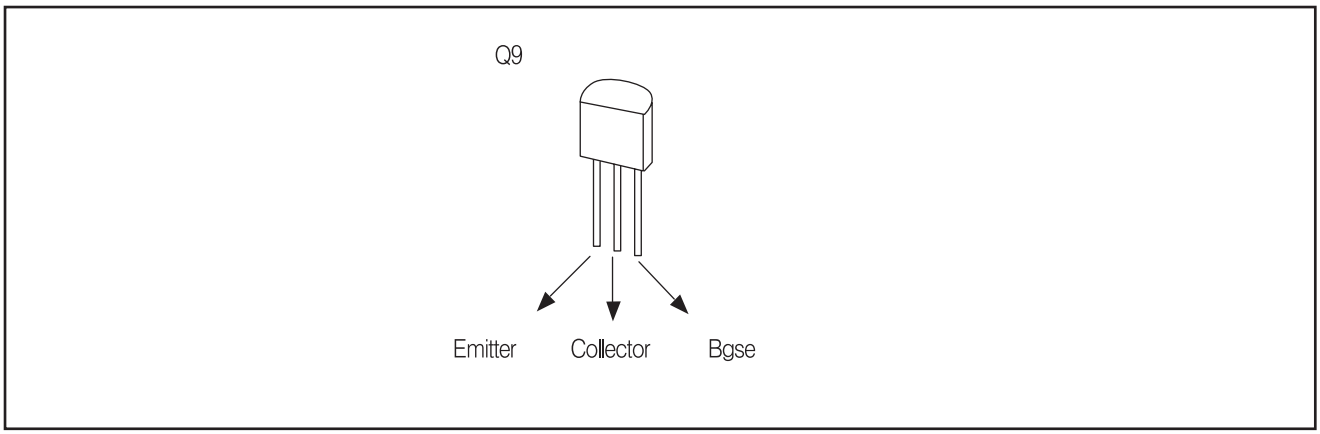
If clock does not keep exact time, you must check resistor R21, R22 and capacitor C5.

2. P. C. B. CIRCUIT DIAGRAM(Q-TYPE)

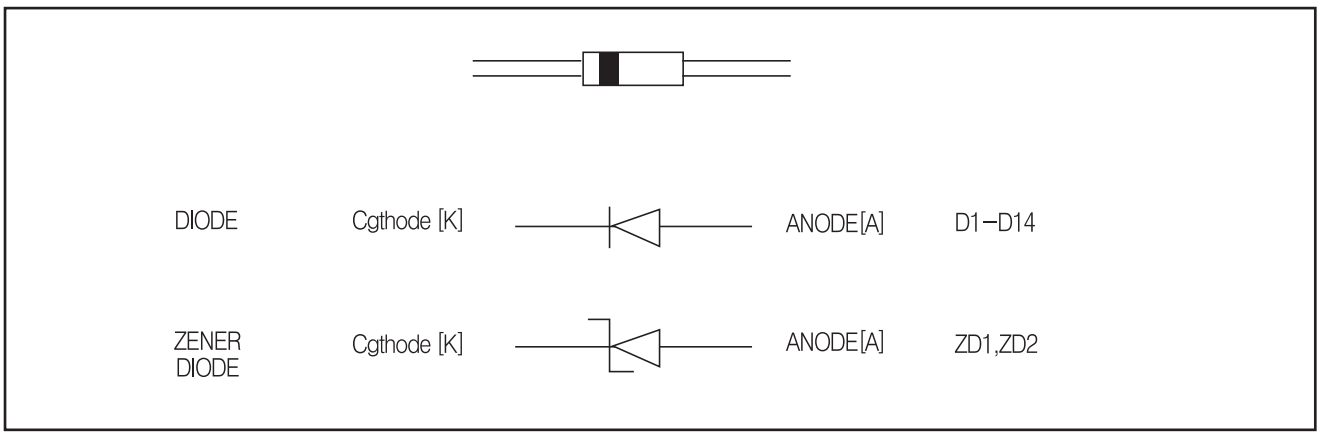


3. COMPONENT INFORMATION

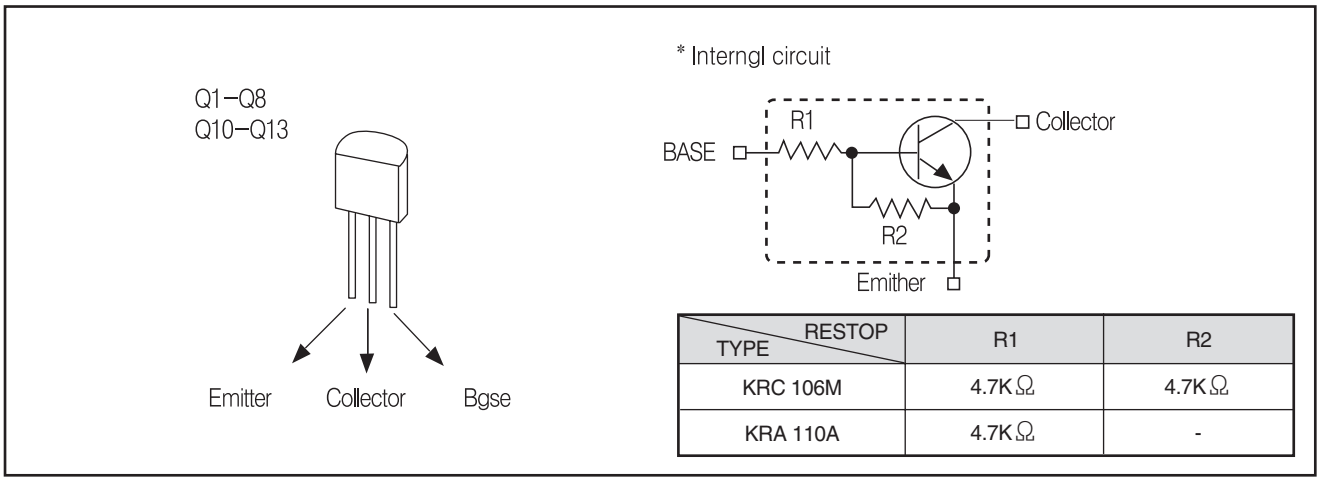
1) Transistor



2) Diode and Zener Diode



2) Digital Transistor



TYPE \ RESTOP	R1	R2
KRC 106M	4.7KΩ	4.7KΩ
KRA 110A	4.7KΩ	-

✔ **Caution**: In this Service Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service information Center(http://svc.dwe.co.kr)

5. P. C. B. LOCATION No.

NO	PART NAME	REF NO.	SPECIFICATION	PART CODE	Q'TY
1	RESISTOR	R11, R15, R17, R24	1K, 1/6W, 5%	RD-AZ102J-	4
2	RESISTOR	R13, R16, R22	10K, 1/6W, 5%	RD-AZ103J-	3
3	RESISTOR	R21	4.7K, 1/6W, 5%	RD-AZ472J-	1
4	RESISTOR	R10, R18, R19, R20	100K, 1/6W, 5%	RD-AZ104J-	4
5	RESISTOR	R14	1M, 1/6W, 5%	RD-AZ105J-	1
7	RESISTOR	R12	100K, 1/6W, 5%	RD-AZ101J-	1
8	RESISTOR	R23	51K, 1/4W, 5%	RD-AZ510J-	1
9	RESISTOR	R1, 2, 3, 4, 5, 6, 7, 8, 9	330, 1/4W, 5%	RD-4Z331J-	9
10	RARRAY	RA1	RGLD6X104J	RA-87X104J-	1
11	DIODE	D1-D6, D10, D11, D12	1N4148M	DZN4148M-	9
12	DIODE	D7, D8, D9, D13, D14	1N4002A	DZN4002A-	5
13	DIODE ZENER	ZD2	5.1VB, 1/2W	DZTZ5R1B-	1
14	DIODE ZENER	ZD1	3.9VB, 1/2W	DZTZ3R9B-	1
15	TRANSISTOR	LVT1	DMR-602FS	5EPU035408	1
16	CAPACITOR CERAMIC	EC1	100MF 16V RSS	CEXF1C101V	1
17	CAPACITOR CERAMIC	EC2	1000MF 25V RSS	CEXF1C102V	1
18	P.C.B BARE	M152	M152	3514315400	1
19	LED DISPLAY	DP1	DDG611Q	DDDG611Q00	1
20	C ARRAY	CA1	F6 102Z	CN6XB-102M	1
21	TRANSISTOR	Q9	KTA1270Y	TZTA1270Y-	1
22	TRANSISTOR	Q1-Q5	KRA110M	TZRA110M--	5
23	TRANSISTOR	Q6-Q8, Q10-Q13	KRC106M	TZRC106M--	7
24	CONNECTOR WAFER	CN1	YW396-02V	3519150520	1
25	CONNECTOR WAFER	CN3	YM396-05AV	3519150510	1
26	CONNECTOR WAFER	CN2	FCZ254-11	441M367160	1
27	CONNECTOR WAFER	RY3(COIL PART)	35312-0370	3519105900	1
28	BUZZER	BZ1	BM-20K	3515600100	1
29	REGULATOR	VL1	MC7805C	1CPMC7805C	1
30	CAPACITOR CERAMIC	C1	50V 473 AXIAL	CCZF1H473Z	1
31	CAPACITOR CERAMIC	C2, C3, C4, C5, C6	50V 104 AXIAL	CCZF1H104Z	5
32	RESONATOR	CR1	CRT 4.00MS	5P4R00MTS-	1
33	SW RELAY	RY1	G5G-1A, 1C, 1P 12V	5SC0101121	1
34	SW RELAY	RY2	G5G-IA, IC, IP 12V	5SC0101121	1
.35	SWRELAY	RY3	CS11-12SH 1C, 1P	5SC0101128	1
36	IC MICOM	IC1	HD404054A34S	147S611MQ1	1

* D7, Q10, RY3 INSERT ONLY SLOW ACTING RELAY

EXPLODED VIEW AND PARTS LIST

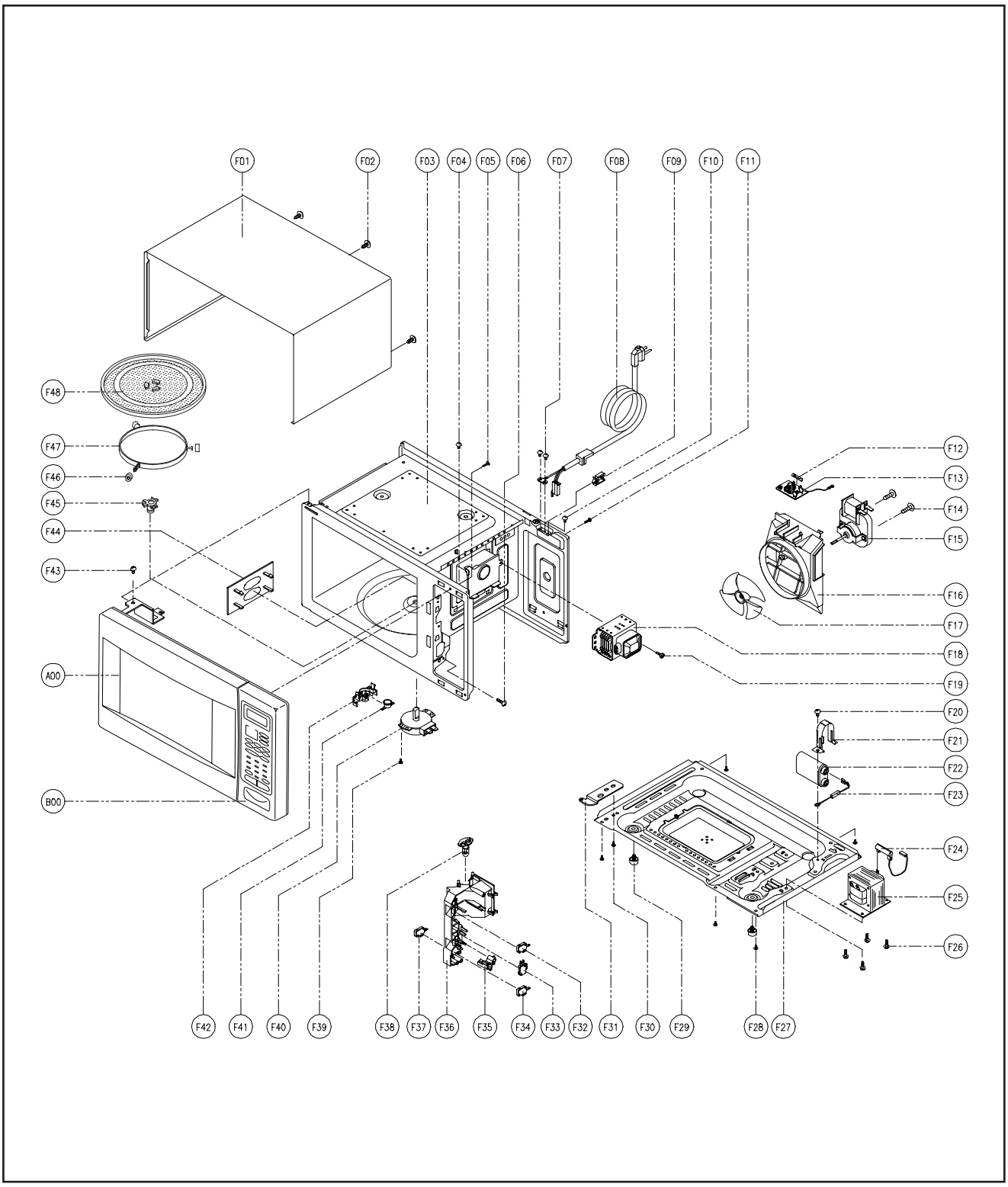
1. DOOR ASSEMBLY

Refer to Disassembly and assembly.

2. CONTROL PANEL ASSEMBLY

Refer to Disassembly and assembly.

3. TOTAL ASSEMBLY



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REF.NO	PART CODE	PART NAME	DESCRIPTION	Q'TY
A00	3511707940	DOOR AS	KOR-618Q	1
B00	PKCPSWD500	CONTROL PANEL AS	KOR-63XQ	1
F01	3510801310	CABINET	PCM T0.36 GE	1
F02	7112401011	SCREW TAPPING	T1 TRS 4 * 10 MFZN	3
F03	3516109620	CAVITY JOINT AS	CAVITY WELD AS	1
F04	7112401011	SCREW TAPPING	T1 TRS 4 * 10 MFZN	1
F05	7122401211	SCREW TAPPING	T2S TRS 4 * 12 MFZN	1
F06	7122401211	SCREW TAPPING	T2S TRS 4 * 12 MFZN	1
F07	7112401011	SCREW TAPPING	T1 TRS 4 * 10 MFZN	2
F08	35113AEQ0D	CORD POWER AS	3× 0.75 70×70 100-RTML	1
F09	4413A90012	CLAMP POWER CORD	NYLON66	1
F10	7112401011	SCREW TAPPING	T1 TRS 4 * 10 MFZN	1
F11	7122401211	SCREW TAPPING	T2S TRS 4 * 12 MFZN	1
F12	4415D67620	FUSE	250V 12A 65TS	1
	4415D67120	FUSE	250V 12A MDA	1
F13	3518606200	NOISE-FILTER	DWLF-M12	1
F14	7121403011	SCREW TAPPING	T2S PAN 4×30 MFZN	2
F15	3963513100	MOTOR SHADE POLE	230V 17W OEM-10DWC2-A07	1
	3963512310	MOTOR SHADED POLE	230V 20W MW10CA-M02	1
F16	3512517000	GUIDE WIND	PP	1
F17	3511800300	FAN	PP+30%GLASS	1
F18	3518002200	MAGNETRON	2M218H(MF)1	1
F19	3516004000	SPECIAL SCREW	T2 BOLT FLANGE 5×12 DACRO	1
F20	7S422X4081	SPECIAL SCREW	TT2 TRS 4 * 8 SE MFZN	1
F21	3513003200	HOLDER HV CAPACITOR	SECC T0.6	1
F22	3518302200	CAPACITOR HV	2100VAC 0.98uf #187	1
F23	3518400400	DIODE HV	HVR-1X-3AB 12KV#187	1
F24	3518701100	FUSE HV	5KV 0.55A HV-41A55-02	1
F25	3518113700	TRANS HV	DY-N80S0-63T	1
F26	3516003700	SPECIAL SCREW	TT3 HEX 4X8 FLG MFZN	4
F27	3510311700	BASE	SBHG T0.8	1
F28	7112401011	SCREW TAPPING	T1 TRS 4 * 10 MFZN	5
F29	3512100900	FOOT	PP DASF-130	2
F30	7S422X4081	SPECIAL SCREW	TT2 TRS 4×8 SE MFZN	1
F31	3515201101	STOPPER HINGE * U	SCP-1 T2.5	1

✔ **Caution**: In this Service Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service information Center(http://svc.dwe.co.kr)

REF.NO	PART CODE	PART NAME	DESCRIPTION	Q'TY
F32	4415A17352	SW MICRO	VP-533A-OF SPON #187 200G	1
F33	4415A66910	SW MICRO	VP-531A-OF/SZM-V16-FA-61	1
F34	4415A17352	SW MICRO	VP-533A-OF SPNO #187 200G	1
F35	351302600	LEVER LOCK	POM	1
F36	3513811700	LOCK	POM	1
F37	4415A17352	SW MICRO	VP-533A-OF SPNO #187 200G	1
F38	3513601600	LAMP	BL 240V 25W T25 C7A H187	1
F39	7121400611	SCREW TAPPING	T2S PAN 4×6 MFZN	1
F40	3966310100	MOTOR SYNCRO	220V 2.5W GM-16-24FD12	1
	3966310110	MOTOR SYNCRO	220V 2.5W M2LJ49ZT52	1
F41	3518905300	THERMOSTAT	OFF:75 ON:65H #187 NB	1
F42	3513003400	HOLDER THERMOSTAT	PBT	1
F43	3516003700	SPECIAL SCREW	TT3 HEX 4X8 FLG MFZN	1
F44	3511406200	COVER WAVE GUIDE	HEATPROOF PP	1
F45	3517400620	COUPLER	XAREC	1
F46	3514700710	ROLLER	TEFLON	3
F47	3512517300	GJIDE ROLLER	PP 5113MF6 A353B	1
F48	3517203600	TRAY	GLASS	1

DAEWOO

DAEWOO ELECTRONICS CO., LTD.
686, AHYEON-DONG MAPO-GU SEOUL, KOREA
C.P.O BOX 8003 SEOUL, KOREA
TELEX: DWELEC K28177-8
CABLE: “DAEWOOELEC”

S/M NO. : R63XQ0S001

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